

Appl. No. 09/879,242

Amdt. Dated January 7, 2004

Reply to Office Action of September 25, 2003

REMARKS

Reconsideration of the application is requested.

Applicant acknowledges the Examiner's confirmation of receipt of applicant's certified copies of the priority documents for the German Patent Application 198 56 403.1, filed December 7, 1998 supporting the claim for priority under 35 U.S.C. § 119 and PCT Patent Application PCT/DE99/03843, filed December 1, 1999 supporting the claim for priority under 35 U.S.C. § 120.

Claims 1-16 are in the application. Claims 1-4, 7, 9, 11, and 13 have been amended.

In "Claim Rejections - 35 U.S.C. § 112" on page 2 of the above-identified Office Action, claims 1-17 have been rejected as being indefinite under 35 U.S.C. § 112, second paragraph.

More specifically, the Examiner states that regarding claims 1-4, 7, 9, 11, and 13 the terminology "can be connected" and "dynamically modifiable" are unclear because it is not clear if a limitation is being recited. Accordingly, applicants have changed the claims to clarify that the plurality of units are "configured to be connected" and that a default

Appl. No. 09/879,242

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master is selected "according to a dynamically modifiable default-master stipulation."

Support for these changes may be found on pages 2-6 and 9-14 of the specification of the instant application.

It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, second paragraph. The above-noted changes to the claims are provided solely for clarification or cosmetic reasons. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claim for any reason related to the statutory requirements for a patent.

In "Claim Rejections - 35 U.S.C. § 102" on page 3 of the above-identified Office Action, claims 1-3 and 7-12 have been rejected as being fully anticipated by U.S. Patent No. 5,845,096 to Munguia (hereinafter '096) under 35 U.S.C. § 102(e).

In "Claim Rejections - 35 U.S.C. § 103" on page 4 of the above-identified Office Action, claims 4-6 and 13-16 have been rejected as being obvious over '096 in view of U.S. Patent No. 6,473,817 to Jeddeloh (hereinafter '817) under 35 U.S.C. § 103(a). It should be noted that '817 was

Appl. No. 09/879,242

Amdt. Dated January 7, 2004

Reply to Office Action of September 25, 2003

erroneously reported as "US 5778200" on page 4 of the Office Action.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a multimaster bus system including:

a plurality of units configured to be connected via a bus;

a default master that is selected from the plurality of units according to a dynamically modifiable default-master stipulation that is based on criteria selected from the group consisting of:

when each unit of the plurality of units accesses the bus,

how often each unit of the plurality of units accesses the bus, and

how long each unit of the plurality of units accesses the bus,

Appl. No. 09/879,242.

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Independent claims 2, 3, 4, 7, 9, 11 and 13 contain similar language.

The '096 reference discloses a system and method for determining upon which peripheral component to "park" the PCI bus or similar shared multi-master bus. The '096 system does not merely grant access to the PCI bus to the last peripheral component to have accessed the PCI, but applies an adaptive arbitration system **based on requests** by each of the peripheral components for access to the PCI bus. More specifically, one embodiment of '096 grants the peripheral component **which requests access** to the PCI bus most often access to the PCI bus, when no other peripheral component is **requesting access** to the PCI bus (Col. 2, Lines 34-62). In this manner the '096 reference "parks the PCI bus on the peripheral component which has, in the past, **requested access** to the PCI bus most often" (*emphasis added* Col. 2, Line 39-44).

In contrast, the instant application selects the default master based on criteria that are based upon the actual use or access to the bus, not merely the requests to access the bus. The distinction between use/access and requests to access allows for a more accurate consideration of bus conditions, because the default master does not need to make

Appl. No. 09/879,242

Amdt. Dated January 7, 2004

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a request prior to "use" or "access" of the bus. This difference is explained in this excerpt found on page 10 of the instant application:

The unit which is bus master at the instant at which it needs the bus has the advantage that it is able to use the bus immediately, that is to say without a prior bus request. A unit which is not the bus master at the instant at which it needs the bus must first request the bus, which means that the required bus access is delayed by at least one bus cycle.

Clearly, '096 does not show a default master selected from the plurality of units according to a dynamically modifiable default-master stipulation that is based upon criteria of when each unit "accesses the bus" as recited in claim 1 of the instant application. Rather '096 relies on requests by the peripheral components instead of actual use or access.

Similar claim language regarding determining the default master based upon "accesses" or "using" the bus is included in the remaining independent claims 2, 3, 4, 7, 9, 11 and 13.

The '817 reference discloses a bus arbitration method that regulates access to a common bus by a plurality of requesting devices according to a priority rank. More specifically, the system described in '817 includes consideration of a weighted bandwidth in assigning the priority rank to the requesting devices. "In addition to data transfer speed, the desired weighted bandwidth may also reflect the data transfer size,

Appl. No. 09/879,242

Amdt. Dated January 7, 2004

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number of requests or latency requirements associated with the device or a combination of these and other factors" (Col. 4, lines 27-30). In this manner, the priority rank is used to grant a requesting device access to the bus. For example, the '817 reference states:

When multiple bus mastering devices 56A-56N request access to the bus at the same time, the arbiter logic 52 uses the priority rank of each device to determine which of the bus mastering devices shall access the bus 54. Once access to the bus 54 is granted to the requesting device with the highest priority rank, the selected device executes one bus transfer and relinquishes control of the bus 54. (Col. 4, Lines 43-52).

As such, the bus mastering devices described in '817 clearly do not function as a default master. Upon selection of the bus mastering device with the highest priority rank, the system does NOT regard the selected bus mastering device as a default master. Rather '817 clearly states that the selected bus mastering device will execute "one bus transfer" and relinquish control of the bus.

Clearly, '817 does not dynamically assign a default master among the described bus mastering devices. More specifically, '817 does NOT dynamically select the default master according to "accesses" of each unit connected to the bus as recited in the claims of the instant application. Rather '817 determines which bus mastering device should access the bus according to the priority rank and weighted bandwidth for each bus mastering device. Thus, the bus

Appl. No. 09/879,242

Amdt. Dated January 7, 2004

Reply to Office Action of September 25, 2003

mastering devices 56A-56N are not the same as the "default master selected from the plurality of units" as recited in claim 1 of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1-4, 7, 9, 11, and 13. Claims 1-4, 7, 9, 11, and 13 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 4, 7, 9, 11, or 13.

In view of the foregoing, reconsideration and allowance of claims 1-16 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section 1.136(a) in the amount of \$110.00 in accordance with Section 1.17 is enclosed herewith.

Appl. No. 09/879,242

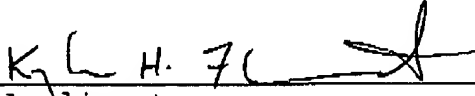
Amdt. Dated January 7, 2004

Reply to Office Action of September 25, 2003

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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For Applicant

KHF:cgm

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